

REMARKS:

Claims 1, 3, 6 and 8 have been amended by this paper and claims 2, 4, 7 and 9 have been cancelled by this paper.

The amendments merely incorporate limitations from dependent claims 2, 4, 7 and 9 into independent claims 1, 3, 6 and 8 and, therefore, should be entered after final. No new matter has been added.

Claims 1-4, 6-9 and 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,413,550 to Castel (the "Castel reference"), in view of Watkin, N.A. et al., "High-Intensity Focused Ultrasound Ablation of the Kidney in a Large Animal Model," Journal of Endourology, vol. 11, no. 3 (June 1997) (the "Watkin reference"), Hill, C.R. et al., "Lesion Development In Focused Ultrasound Surgery: A General Model," Ultrasound in Med. & Biol., vol. 20, no. 3, pp. 259-269 (1994) (the "Hill reference") and Billard, B.E. et al., "Effects of Physical Parameters on High Temperature Ultrasound Hyperthermia," Ultrasound in Med. & Biol., vol. 16, no. 4, pp. 409-420 (1990) (the "Billard reference"). Reconsideration is respectfully requested in view of the foregoing amendments and the remarks set forth below.

As previously noted – and conceded by the Examiner – the Castel reference fails to disclose determining in vivo treatment time or in vivo ultrasound acoustic power from in vitro treatment time or in vitro ultrasound acoustic power. Therefore, the Castel reference is of little relevance to the patentability of the claims of the present application.

Also, as previously noted, the Watkin reference discloses using short ultrasound exposure times such that the vivo treatment time can be the same as the in vitro treatment time. Therefore, the Watkin reference teaches away from calculating in vivo treatment time or in vivo ultrasound acoustic power from a mathematical function of in vitro treatment time or in vitro ultrasound acoustic power.

Furthermore, like the Watkin reference, the Billard reference discloses the use of short exposures times such that blood perfusion rate need not be taken into consideration.

Thus, the issue is whether the Hill reference discloses determining in vivo treatment time or in vivo ultrasound acoustic power from equations that take into consideration in vitro treatment time, in vitro ultrasound acoustic power, tissue density, blood perfusion rate, the temperature threshold for tissue ablation, the initial in vivo patient tissue temperature and the

initial in vitro patient tissue temperature. Applicants submit that the Hill reference includes no such disclosure.

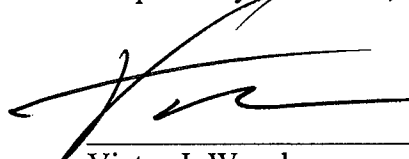
The Examiner notes that the Hill reference discloses that “it will probably always be necessary to make some use of [documented lesion size data for excised tissue] and the above theoretical structure in extrapolating to in vivo human and animal situations.” (*Hill*, pp. 265-266.) However, the Hill reference provides no express disclosure as to how such an extrapolation can be made.

Furthermore, Applicants note that the equations disclosed in the Hill reference, such as Eq. 1 on page 260, relate parameters such as ultrasonic power and time, and do indeed include terms such as blood perfusion and tissue density. However, the equations disclosed in the Hill reference do not relate in vivo treatment time to in vitro treatment time or in vivo ultrasonic acoustic power to in vitro ultrasonic acoustic power.

Inasmuch as the Examiner has failed to identify prior art equations relating in vivo treatment time to in vitro treatment time or in vivo ultrasonic acoustic power to in vitro ultrasonic acoustic power, Applicants submit that the Examiner has failed to establish a prima facie case of obviousness with respect to the claims presented herein.

Accordingly, withdrawal of the rejections of claims 1-4, 6-9 and 11-14 is respectfully requested.

Respectfully submitted,



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